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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,818	03/04/2004	Sean Chang	0941-0927P	3664

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

JOHNSON, MATTHEW A

ART UNIT	PAPER NUMBER
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3682

NOTIFICATION DATE	DELIVERY MODE
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06/16/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/791,818	Applicant(s) CHANG, SEAN	
	Examiner MATTHEW JOHNSON	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-11 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 8-11 and 13-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 4/3/2008 for Continued Examination (RCE) is accepted and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Hung (USP-6,747,803).

Re clm 24: Hung discloses a color wheel module (1) comprising a(n):

- Motor (2)
- Color filter disk (12) driven by the motor
- Holder (11) disposed on the color filter disk and having a sidewall (near 116, Fig. 2) extended away from the color filter disk (the sidewall of 11 extends to the left away from disk 12)
- Curable fluid (UV glue) contained in the holder, wherein when the motor drives the color filter disk to rotate

The limitation, “the curable fluid will be cured after the motor and the color filter disk are balanced simultaneously” is a product-by-process claim and is not given

patentable weight in an apparatus claim. The prior art discloses all of the claimed structure and therefore anticipates the claim. (See MPEP 2113).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (USP-6,731,588) in view of Hung (USP-6,747,803).

Re clm 8: Han discloses an anti-vibration apparatus applied in a rotating disk of an image display system for eliminating unbalance of the rotating disk, comprising a(n):

- Motor (100)
- Spindle (130) housed in the motor and coupled to a rotating disk (1)
- Holder (200) having a side wall (210-1) extended away from the rotating disk (in the negative y direction), and having a flange (top of 210, Figs. 16 and 17) on a top end of the side wall and extending toward a center of the rotating disk (the top end of 210 has a thickness that extends towards a center of the rotating disk)
- Fluid (272) contained in the holder

- Predetermined amount of spheres (271) placed in the holder (C11 L9-13, C16 L47-57)

While Han does indeed disclose a fluid and a predetermined amount of spheres contained in the holder, he does not disclose a curable fluid.

Hung teaches curable fluid (UV glue) contained in the holder that is cured to achieve a permanent balance of the rotating disk (12).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have substituted the fluid in the device of Han with a curable fluid, as taught by Hung, for the purpose of achieving a permanent balance of the rotating disk.

Re clms 9 and 10: Han discloses that the holder (200) is formed by an annular element or a bowl (210) bonded to the disk by means of coupling (220,222,223; C9 L31-38).

Re clm 11: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 12: Han discloses that the holder (200) has a flange (See Fig. 15) located on a top end of a side wall (210) thereof and extended inwards.

Re clm 13: Han discloses that the holder (200) and the rotating disk (1) are coaxial (See Fig. 2).

Re clm 14: Han discloses that the spheres (271) are made of metal (C10 L23-33).

Re clm 15: The examiner notes that the limitation, "...the curable fluid is cured by providing photo energy, thermal energy or catalyst" is a product-by-process claim. The

patentability of a product does not depend on its method of production (See MPEP 2113). Additionally, Hung further discloses the curable fluid is cured by providing thermal energy (UV glue, C2 L12-14).

6. Claims 8-24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung (USP-6,747,803) in view of Goodrich et al. (USP-3,696,688).

Re clm 8: Hung discloses an anti-vibration apparatus applied in a rotating disk of an image display system for eliminating unbalance of the rotating disk, comprising a(n):

- Motor (2)
- Spindle (C2 L4-6) housed in the motor and coupled to a rotating disk (12)
- Holder (11) having a side wall (near 116, Fig. 2) extended away from the rotating disk (the sidewall of 11 extends to the left away from disk 12)
- Curable fluid (UV glue) contained in the holder

While Hung does indeed disclose that the curable fluid flows to the periphery side of the holder under a vibration force and is distributed in such a way to balance the disk, he does not disclose a predetermined amount of spheres placed in the holder.

Goodrich teaches an anti-vibration apparatus for eliminating vibration of a rotating disk resulting from unbalance comprising a predetermined amount of spheres (20) placed in a holder (17) formed on a rotating disk (10) for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a predetermined amount of spheres into the curable fluid of Hung for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

Re clms 9 and 10: Hung further discloses that the holder (11) is formed by an annular element bonded by means of adhering and coupling to the disk (12).

Re clm 11: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 12: Hung further discloses that the holder has a flange located on a top end of the side wall thereof and extended inwards (C2 L39-40, square groove 116).

Re clm 13: Hung further discloses that the holder (11) and the rotating disk (12) are coaxial.

Re clm 14: Goodrich further discloses that the spheres (20) are made of metal (C1 L55).

Re clm 15: The examiner notes that the limitation, "...the curable fluid is cured by providing photo energy, thermal energy or catalyst" is a product-by-process claim. The patentability of a product does not depend on its method of production (See MPEP 2113). Additionally, Hung further discloses the curable fluid is cured by providing thermal energy (UV glue, C2 L12-14).

Re clm 16: Hung discloses a color wheel module (1) applied in an image display system for modulating the color of an incident light comprising a(n):

- Motor (2)

- Disk-shaped color filter (12) with a plurality of thin film color filters (12a-12d)
- Holder (11) formed on the disk-shaped color filter disk and having a sidewall (near 116, Fig. 2) extended away from the disc-shaped color filter disk (the sidewall of 11 extends to the left away from disk 12)
- Curable fluid (UV glue) contained in the holder

While Hung does indeed disclose that the curable fluid flows to the periphery side of the holder under a vibration force and is distributed in such a way to balance the disk, he does not disclose a predetermined amount of spheres placed in the holder.

Goodrich teaches an anti-vibration apparatus for eliminating vibration of a rotating disk resulting from unbalance comprising a predetermined amount of spheres (20) placed in a holder (17) formed on a rotating disk (10) for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a predetermined amount of spheres into the curable fluid of Hung for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

The limitation, "the curable fluid will be cured after the motor and the color filter disk are balanced simultaneously" is a product-by-process claim and is not given

patentable weight in an apparatus claim. The prior art discloses all of the claimed structure and therefore anticipates the claim. (See MPEP 2113).

Re clms 17 and 18: Hung further discloses that the holder (11) is formed by an annular element bonded by means of adhering and coupling to the disk (12).

Re clm 19: Hung further discloses a thermal sensitive curable fluid (UV glue).

Re clm 20: Hung further discloses that the holder has a flange located on a top end of the side wall thereof and extended inwards (C2 L39-40, square groove 116).

Re clm 21: Hung further discloses that the holder (11) and the rotating disk (12) are coaxial.

Re clm 22: Goodrich further discloses that the spheres (20) are made of metal (C1 L55).

Re clm 23: Hung discloses a color wheel module (1) comprising a(n):

- Motor (2)
- Color filter disk (12) driven by the motor
- Holder (11) disposed on the color filter disk and having a sidewall (near 116, Fig. 2) extended away from the color filter disk (the sidewall of 11 extends to the left away from disk 12)

While Hung discloses a curable fluid that is fixed after the balance of the color wheel module is attained, he does not disclose at least one sphere placed in the holder.

Goodrich teaches an anti-vibration apparatus for eliminating vibration of a rotating disk resulting from unbalance comprising at least one sphere (20) placed in a holder (17) formed on a rotating disk (10) for the purpose of providing a better damping

device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to add at least one sphere into the curable fluid of Hung for the purpose of providing a better damping device which can reduce vibrations cause by a higher amplitude of vibration during a higher rotational speed.

The limitation, “the curable fluid will be cured after the motor and the color filter disk are balanced simultaneously” is a product-by-process claim and is not given patentable weight in an apparatus claim. The prior art discloses all of the claimed structure and therefore anticipates the claim. (See MPEP 2113).

Response to Arguments

7. Applicant's arguments filed 5/14/2008 have been fully considered but they are not persuasive.

Regarding claim 8, Applicant argues that Han does not disclose a flange located on a top end of the side wall and extending toward a center of the rotating disk. As described above, Han discloses the upper portion of the sidewall (210, Figs. 16 and 17) having a flange (at the top end) that has a thickness that extends toward a center of the rotating disk.

Regarding claims 16, 23 and 24, Applicant argues that Hung in view of Goodrich does not disclose, “the curable fluid will be cured after the motor and the color filter disk are balanced simultaneously”. As noted above, this limitation is a product-by-process

claim and is not given patentable weight in an apparatus claim. The prior art discloses all of the claimed structure and therefore anticipates the claim. (See MPEP 2113).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW JOHNSON whose telephone number is (571)272-7944. The examiner can normally be reached on Monday - Friday 8:30a.m. - 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J./
Examiner, Art Unit 3682

Application/Control Number: 10/791,818
Art Unit: 3682

Page 11

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3682